

## Claims

We claim:

- 5 1. A radio-frequency (RF) apparatus capable of transmitting radio-frequency signals, the radio-frequency apparatus comprising:
- transmitter path circuitry, including:
- a voltage-controlled oscillator circuitry, the voltage-controlled circuitry configured to generate an output signal having an adjustable frequency in response to first and second control signals ;
- 10 a first feedback circuitry, the first feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the first feedback circuitry configured to provide the first control signal to the voltage-controlled oscillator circuitry; and
- 15 a second feedback circuitry, the second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the second feedback circuitry configured to provide the second control signal to the voltage-controlled oscillator circuitry,
- 20 wherein the first control signal coarsely adjusts the frequency of the output signal of the voltage-controlled oscillator circuitry to a desired frequency, and
- wherein the second control signal fine tunes the frequency of the output signal of the voltage-controlled oscillator circuitry to the desired frequency.

- 25 2. A radio-frequency (RF) apparatus, comprising:
- a first circuit partition, comprising receiver analog circuitry configured to produce a digital receive signal from an analog radio-frequency signal; and
- a second circuit partition, comprising receiver digital circuitry configured to accept the digital receive signal, wherein the first and second circuit partitions are partitioned so that interference effects between the first circuit partition and the second circuit partition tend to be reduced.
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